

Appl. No. : 10/786,339
Filed : February 25, 2004

REMARKS

Claims 1-31 and 64-73, withdrawn from consideration under 37 C.F.R. § 1.142(b), are cancelled, Applicants reserving the ability to file divisional applications thereon under 35 U.S.C. § 121.

Objection to the Specification

The specification has been objected to as failing to provide proper antecedent basis for the subject matter of Claim 35. Support for the claimed subject matter is found in Figure 6 of the application as filed, and in its accompanying description.

Claim Objections

A number of claims are objected to because of informalities as set forth in paragraph 3 of the Office Action. It is submitted that the following amendments to the claims obviate the objections.

Applicants have amended generic Claim 32 to recite a microporous membrane fiber wall, the word “membrane” providing antecedent basis for later dependent claims. Claim 32 has also been amended to recite that both ends of the fibers are secured to the elongated hollow tubes, whereby the interior of the plurality of the elongated hollow tubes communicates with the interior lumen of each of the fibers. The language of the amendment to Claim 32 is fully supported by the original specification, paragraph 21. Claim 33 has been amended to delete the unnecessary term “microporous” regarding the elongated fiber and to better conform to the antecedent basis of generic claim 32 on which it is dependent. Claim 34 has been amended to recite “said plurality of elongated hollow tubes” to conform to the antecedent language of Claim 32 on which it is ultimately dependent. Additional amendments of Claim 34 to replace “a” with “the” has also been made. The language of Claims 55-57 has been amended to delete “said” and substitute “having a”. Claims 58-60 are amended to clarify the language of the mass density zones and to avoid the use of the term “said” based on the language of the claims on which Claims 58-60 are dependent. The amendments to the claims do not include any new matter and are fully supported by the specification including the original claims. Accordingly, Applicants respectfully request that the objections be withdrawn.

Claim Rejection - 35 U.S.C. §103(a)

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Claims 32-34 and 36-54 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,224,926 (Gorsuch) in view of U.S. Publication No. 2002/0046970 (Murase, et al.). The rejection is respectfully traversed. It is asserted in the Office Action that Gorsuch teaches a filter device having a plurality of elongated hollow tubes and in which the first and second ends of the elongated fibers are secured to the elongated hollow tubes whereby the interior of the plurality of elongated hollow tubes communicates with the interior lumen of each of the fibers. Gorsuch does not teach a filter device having a plurality of elongated hollow tubes which communicate with the interior lumen of each of the fibers. In the drawings of Gorsuch, only a single elongated hollow tube is disclosed, with both ends of the fibers secured to the single tube and communicating with the interior of the tube. In the language of the claims of Gorsuch referred to by the Examiner, only one end of the fibers is secured to the hollow tube, and there is no recitation or teaching of a second discrete hollow tube communicating with the interior of the fibers. Accordingly, the teaching of Gorsuch fails to describe the filter device as recited in Claim 32. Moreover, the modification of Gorsuch to include a continuous filament embedded in a fiber wall as described by the secondary reference to Murase, does not result in a filter device recited in Claim 32. Accordingly, the rejection is improper.

The filter device recited in Claim 33 is not taught or suggested by the combination of Gorsuch with Murase as alleged by the Examiner. Although Murase teaches a heterogeneous fiber wall structure with gradually increasing pore diameters and filaments embedded in the fiber wall, the modification of Gorsuch with a Murase filter does not result in a filter device having the characteristics recited in Claim 33 for the aforesaid reasons regarding the failure of Gorsuch to teach a filter device having a plurality of elongated hollow tubes communicating with the interior lumen of each of the fibers. Accordingly, the rejection of Claim 33 under 35 U.S.C. § 103(a) is improper.

Regarding Applicant's Claim 34, the Examiner states that Gorsuch teaches first and second elongated hollow tubes extending substantially parallel along their lengths with a first end of each of the elongated fiber secured in the first hollow tube and a second end of each of the fiber secured to the second hollow tube with the interior fiber lumen of each fiber communicating with the interior of the first and second hollow tube. No such structure is described in the Gorsuch specification nor is it shown in any of the drawings. It is submitted that the Examiner

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has misinterpreted the language of Claims 14 and 27 of Gorsuch which do not recite a structure as alleged by the Examiner. The Gorsuch claims simply recite that one end of the fibers are connected to a first hollow tube, and there is no recitation or description that the second end of the fibers is secured to a second hollow tube. Accordingly, it is submitted that the Examiner's statement regarding the structure recited in the Gorsuch claims is not supported by the document.

Regarding the rejection of Claims 36-43 and 45-49, notwithstanding any of the descriptions of the filaments described by Murase to modify the fibers of Gorsuch, it is submitted that Applicant's claimed filter device structure is not achieved for the aforesaid reasons.

Regarding Claims 50-54, the Examiner alleges that Murase teaches a fiber wall structure having a continuous change in mass density from the outer wall surface to the inner wall surface, and having two, three or four mass density zones. Applicant takes issue with the Examiner's characterization of such teaching of Murase which simply refers to heterogeneous fiber wall structure comprising a dense layer and a supporting layer having gradually increasing pore diameters. It is submitted that such a teaching does not accurately describe a fiber wall structure as recited in Applicant's claims. However, that notwithstanding, it is submitted that the combination references does not teach or suggest Applicant's claimed filter having the characteristics recited for the aforesaid reasons, including the failure of Gorsuch to teach or suggest a plurality of elongated hollow tubes with fibers having first and second ends secured to the hollow tubes, whereby the interior of the plurality of the tubes communicates with the interior lumen of each of the fibers. Accordingly, the rejections based on the combination of references are improper.

Claim Rejection - 35 U.S.C. §103(a)

Claim 32 is rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,561,996 (Gorsuch) in view of the previously discussed U.S. Patent Application publication to Murase et al. The rejection is respectfully traversed. The rejection is improper under 35 U.S.C. § 103(a) since the primary reference of Gorsuch '996 and the present application were, at the time of the invention of the present application, owned by Transvivo, Inc. Submitted herewith are copies of the U.S. Patent and Trademark Office Patent Assignment Abstract of Title for U.S. Patent No. 6,561,996 and for the present application. The abstracts show that U.S. Patent No. 6,561,996 has been owned by Transvivo, Inc. continuously from June 12, 1998

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to the present, including February 25, 2004, the date the present application was filed. Accordingly, it is submitted that under the provisions of 35 U.S.C. § 103(c), U.S. Patent No. 6,561,996 (Gorsuch) is disqualified as prior art; *see* M.P.E.P. 70602(I)(1) and 706.02(I)(2).

Claim Rejection - Obviousness-Type Double Patenting

Claim 32 is rejected on the ground of obviousness-type double patenting over Claim 10 of U.S. Patent No. 6,899,692 to Gorsuch et al. in view of the previously discussed Murase et al. publication. In response, attached hereto is a terminal disclaimer of the present application in compliance with 37 C.F.R. § 1.1321(c) assigned by Applicant's attorney of record. Accordingly, the rejection is obviated.

In view of the amendments to the claims herewith and the distinction between Applicant's claimed invention and the cited prior art for the reasons of record, it is submitted that the claims are in condition for allowance and notification thereof is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns that might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 12/15/06

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09/081,883 APPARATUS AND METHOD FOR IN VIVO HEMODIALYSIS

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Total Assignments: 1

Application #: 09081883

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PCT #: NONE

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Inventor: REYNOLDS G. GORSUCH

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Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

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10/786,339 Structurally optimized hollow fiber membranes

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Publication #: US20050187508

Publ

Inventors: Reynolds G. Gorsuch, Harold W. Peters, Harold H. Handley JR.

Title: Structurally optimized hollow fiber membranes

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Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

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